

In the claims:

1. (currently amended) A method of treating a stenosis or restenosis in a coronary blood vessel characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

implanting a stent at a first location within the coronary blood vessel; and

injecting a therapeutic agent comprising an anti-restenosis agent into the myocardium proximate the coronary blood vessel at a second location, where the second location is distal, in relation to the coronary blood vessel, to the first location at a site distal to the stent.

2. (original) The method of claim 1 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

3. (original) The method of claim 1 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

4. (original) The method of claim 1 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

5. (canceled)

6. (original) The method of claim 1, 2, 3 or 4 further comprising the steps of:

selecting the anti-restenosis agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

7. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a time release formulation.

8. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

9. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

10. (original) The method of claim 1, 2, 3 or 4 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

11. (currently amended) A method of treating a stenosis or restenosis in a coronary blood vessel characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

performing an angioplasty procedure at a first location within the coronary blood vessel; and

injecting a therapeutic agent comprising an anti-restenosis agent into the myocardium proximate the coronary blood vessel at a second location , where the second location is distal, in relation to the coronary blood vessel, to the first location at a site distal to the site of angioplasty.

12. (original) The method of claim 11 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

13. (original) The method of claim 11 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

14. (original) The method of claim 11 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

15. (canceled)

16. (original) The method of claim 11, 12, 13 or 14 further comprising the steps of:

selecting the anti-restenosis agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

17. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a time release formulation.

18. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

19. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

20. (original) The method of claim 11, 12, 13 or 14 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

21. (currently amended) A method of treating a segment of a coronary blood vessel characterized by a proximal end nearest

the origination of blood flow from the heart and a distal end,
said method comprising the steps of:

injecting a therapeutic agent comprising an anti-restenosis agent into the myocardium proximate the coronary blood vessel at a site distal, relative to the proximal and distal ends of the coronary blood vessel, to the segment to be treated.

22. (original) The method of claim 21 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

23. (original) The method of claim 21 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

24. (original) The method of claim 21 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

25. (canceled)

26. (original) The method of claim 21, 22, 23 or 24 further comprising the steps of:

selecting the anti-restenosis agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs,

anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

27. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a time release formulation.

28. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

29. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

30. (original) The method of claim 21, 22, 23 or 24 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

31. (currently amended) A method of treating a segment of a coronary blood vessel characterized by an intraluminal disease, coronary blood vessel further characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said method comprising the steps of:

injecting a therapeutic agent into the myocardium proximate the coronary blood vessel at a site distal, relative to

the proximal and distal ends of the coronary blood vessel, to the segment to be treated.

32. (original) The method of claim 31 further comprising the steps of:

injecting the therapeutic agent into the myocardium from an endocardial space of the heart.

33. (original) The method of claim 31 further comprising the steps of:

injecting the therapeutic agent peri-adventitially through the blood vessel wall.

34. (original) The method of claim 31 further comprising the step of:

injecting the therapeutic agent peri-adventitially through a coronary vein or coronary sinus.

35. (canceled)

36. (original) The method of claim 31, 32, 33 or 34 further comprising the steps of:

selecting the therapeutic agent from the group comprising anti-oxidant drugs, anti-inflammatory drugs, anti-neoplastic agents, anti-angiogenic agents and gene therapy agents.

37. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a time release formulation.

38. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a microsphere formulation.

39. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in micelles.

40. (original) The method of claim 31, 32, 33 or 34 further comprising the step of:

providing the therapeutic agent in a formulation in which the therapeutic agent is encapsulated in liposomes.

41. (currently amended) A kit for delivering a therapeutic agent to a patient suffering from vascular disease characterized by a diseased treatment region in a coronary blood vessel characterized by a proximal end nearest the origination of blood flow from the heart and a distal end, said kit comprising:

a catheter having means for introducing a therapeutic agent into in a perivascular space surrounding the blood vessel; and

a dose of therapeutic agent suitable for introduction into the perivascular space surrounding the blood vessel through the catheter;

instructions for use of the catheter according to the following method:

positioning the means for introducing into the perivascular space; and

delivering a dose of the therapeutic agent into the perivascular space near the diseased treatment region at a site distal, in relation to the coronary blood vessel, to the diseased treatment region.